



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/596,377

09/04/2007

Kevin S. Davies

06-384

5901

34704 7590 08/30/2010

BACHMAN & LAPOINTE, P.C.

900 CHAPEL STREET

SUITE 1201

NEW HAVEN, CT 06510

EXAMINER

LEE, DOUGLAS S

ART UNIT

PAPER NUMBER

2121

MAIL DATE

DELIVERY MODE

08/30/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,377	Applicant(s) DAVIES, KEVIN S.	
	Examiner DOUGLAS S. LEE	Art Unit 2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,25,26,28-31 and 54-57 is/are rejected.
- 7) ☒ Claim(s) 3-24,27 and 32-53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment and Arguments

Applicant's amendments (added new claims 54-57) arguments (claims 1-57) filed 3/24/2010 regarding claims 1, 28, and 29 rejections 35 USC 102(e) Lindstrom (US Pat. No. 6,644,080); claims 2, 25, and 26 rejections 35 USC 103(a)) have been fully considered but they are not persuasive. The office maintained the rejections of claims 1, 28, and 29 35 USC 102(e) Lindstrom (US Pat. No. 6,644,080) and claims 2, 25, and 26 rejections 35 USC 103(a). Claims 3-24, 27, and 32-53 are objected.

Applicant alleges that the difference is clear in the differing purposes of the present invention and Lindstrom. Lindstrom is aimed at determining whether the worksheet is directly under the tool in the correct horizontal position so that the tool strikes the worksheet in the correct place. As defined in claim 1 of the present invention, in the first mode of operation the distance between the tool and the leading edge is maintained between minimum and maximum values. This may have several specific further aspects referenced in the remaining claims. For example, the distance between the worksheet or other object and the tool may be determined so that the tool may be automatically retracted or lowered if the worksheet is moved vertically. That is, if the worksheet is moved up such that the distance between the worksheet and tool falls below the minimum value, the tool is retracted to maintain the distance between said maximum and minimum values. Also, if the tool were moved down such that the distance was then greater than the maximum value, the tool would be moved down. The apparatus shown in Lindstrom is not concerned with the distance between the worksheet (or other objects) and the tool but the correct horizontal positioning of the worksheet. The apparatus of Lindstrom therefore includes no

Art Unit: 2121

feature to determine the distance between the tool and worksheet and maintain the distance between minimum and maximum values. However, the examiner disagrees with the statement of Lindstrom is aimed at determining whether the worksheet is directly under the tool in the correct horizontal position so that the tool strikes the worksheet in the correct place and the apparatus of Lindstrom therefore includes no feature to determine the distance between the tool and worksheet and maintain the distance between minimum and maximum values. First of all claim 1 does not define clearly what is the leading edges of the tool is maintained within minimum and maximum values as specifically argued as the distance between the worksheet or other object and the tool may be determined so that the tool may be automatically retracted or lowered if the worksheet is moved vertically in the response. Second of all, Lindstrom is aimed at determining the worksheet is directly under the tool in the correct horizontal as well as vertical position so that the tool strikes the worksheet in the correct place and the apparatus of Lindstrom therefore includes feature to determine the distance between the tool and worksheet and maintain the distance between minimum and maximum values (see col.4, lines 62-67 where arm 40 may move in any direction x, z, and r axes).

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1, 28, 29, 30, and 54-55 are rejected under 35 U.S.C. 102(e) as being anticipated by Lindstrom (US Pat. #6,644,080).

Art Unit: 2121

Regarding claim 1, Lindstrom discloses a control system for use with a machine having a tool arranged to move through a known path of movement, the control system characterized by comprising: a means for detecting the location of objects in or adjacent the path of the tool (col. 6, lines 10-35, element 48); and a processing and control means arranged to determine the distance between the objects in or adjacent the path of the tool and a leading edge of the tool (col. 6, lines 10-35, element 18); wherein the control system includes a first mode of operation in which the processing and control means controls movement of the tool such that the distance between the objects in or adjacent the path of the tool and the leading edge of the tool is maintained within minimum and maximum values (see col.4, lines 62-67 where arm 40 may move in any direction x, z, and r axes and col. 6, lines 10-35). Regarding claim 28, Lindstrom discloses the processing and control means comprises a software program residing on a digital signal processor (col.5, lines 25-35).

Regarding claim 29, Lindstrom discloses wherein the minimum value is set to zero such that the tool approaches the objects when the distance between the objects in or adjacent the path of the tool and the leading edge of the tool is greater than the maximum value but does not retract away from the objects (col. 8, lines 1-21).

Regarding claim 30, this method claim is rejected for the same reasons applied above rejected system claim 1.

Regarding claim 54, Lindstrom discloses a method of controlling a machine having a tool arranged to move through a known path of movement, the method comprising:
detecting the location of objects in or adjacent the path of the tool (col. 6, lines 10-35, element 48); determining the distance between the objects in or adjacent the path of the tool and a leading

Art Unit: 2121

edge of the tool (col. 6, lines 10-35, element 48); and controlling movement of the tool in a first mode of operation such that the distance between the objects in or adjacent the path of the tool and the leading edge of the tool is maintained within minimum and maximum values, wherein the maximum value is less than the maximum distance travelled by the tool through said known path of movement(see col.4, lines 62-67 where arm 40 may move in any direction x, z, and r axes and col. 6, lines 10-35) .

Regarding claim 55, Lindstrom discloses a method of controlling a machine having a tool arranged to move through a known path of movement, the method comprising: detecting the location of objects in or adjacent the path of the tool(col. 6, lines 10-35, element 48); determining the distance between the objects in or adjacent the path of the tool and a leading edge of the tool(col. 6, lines 10-35, element 48); and controlling movement of the tool in a first mode of operation such that the distance between the objects in or adjacent the path of the tool and the leading edge of the tool is maintained within minimum and maximum values, said minimum and maximum values being non-zero and non-equal(see col.4, lines 62-67 where arm 40 may move in any direction x, z, and r axes and col. 6, lines 10-35) .

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2121

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 2, 25, 26, 31, and 56-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindstrom (US Pat. #6,644,080) in view of Appleyard (US Pat. 6,903,327) and Chen et al. (US Pat. #6,122,023).

Regarding claim 2, the sole difference between this claim and Lindstrom is the processing and control means such that the processing and control means recognizes the presence of obstructions in the region by the images received by the light receiving means. However, Appleyard discloses processing and control means such that the processing and control means recognizes the presence of obstructions in the region by the images received by the light receiving means. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use such processing and control means recognizes the presence of obstructions in the region by the images received by the light receiving means in order to improve the overall safety system for an industrial press.

Regarding claims 25 and 26, the difference between this claim and modified Lindstrom is the light emitting means which includes a laser diode and the current through the laser diode is modulated to create varying speckle patterns and thereby improve resolution of the received image. Chen et al. disclose the light emitting means which includes a laser diode and the current

Art Unit: 2121

through the laser diode is modulated to create varying speckle patterns and thereby improve resolution of the received image. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use such the light emitting means which includes a laser diode and the current through the laser diode is modulated to create varying speckle patterns and thereby improve resolution of the received image in order to improve the overall the resolution of the images by eliminating speckle.

Regarding claim 31, this method claim is rejected for the same reasons applied above rejected system claim 2.

Regarding claims 57 and 58, the sole difference between these claims and Lindstrom is the controlling movement comprises retracting the tool to less than fully retracted height. However, Lindstrom can move upper tool 10 and lower punch 4 can move x, z, and r axes (see col.4, lines 62-67 where arm 40 may move in any direction x, z, and r axes and col. 6, lines 10-35). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to reprogram CNC controller to such processing and control means to retract the tool to less than fully retracted height recognizes the presence of obstructions in order to improve the overall safety system for an industrial press.

Allowable Subject Matter

5. Claims 3-24, 27 and 32-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Douglas Lee, whose telephone number is (571) 272-3745. The examiner can normally be reached on Monday-Friday from 8:00AM- 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Albert Decady, can be reached on (571) 272-3819 or via e-mail addressed to

[albert.decady@uspto.gov]. The fax number for this Group is (571) 273-8300.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to **[doug.lee@uspto.gov]**.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available

Art Unit: 2121

through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

/D. S. L./
Examiner, Art Unit 2121

/Albert DeCady/
Supervisory Patent Examiner, Art Unit 2121